We claim:

1. A method to control access to logical volumes disposed in one or more information storage and retrieval systems using copy service relationships, comprising the steps of:

providing a first information storage and retrieval system comprising a plurality of first logical volumes;

providing a second information storage and retrieval system comprising a plurality of second logical volumes;

providing a plurality of host computers, wherein each of said plurality of host computers is capable of communicating with said first information storage and retrieval system;

forming (N) host computer groups, wherein (N) is greater than or equal to 1;

assigning each of said plurality of host computers to the a host computer group;

forming (N) logical volume groups;

assigning one or more of said plurality of first logical volumes to a logical volume group;

receiving a request from a host computer assigned to the (i)th host computer group to establish a copy service relationship between a source logical volume and a target logical volume, wherein (i) is greater than or equal to 1 and less than or equal to (N);

determining if said source logical volume is assigned to the (i)th logical volume group;

operative if said target logical volume is assigned to the (i)th logical volume group, determining if said second logical volume is assigned to the (i)th logical volume group;

operative if both the source logical volume and the target logical volume are assigned to the (i)th logical volume group, establishing said copy service relationship.

2. The method of claim 1, further comprising the steps of:

receiving a request to revise access rights to one or more of said plurality of first logical volumes or one or more of said plurality of second logical volumes;

determining if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship;

operative if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship, denying said request.

3. The method of claim 1, further comprising the steps of:

receiving a request to revise access rights to one or more of said plurality of first logical volumes;

determining if said request comprises unassigning one of said first logical volumes in a copy relationship;

operative if said request comprises unassigning one of said first logical volumes in a copy service relationship, wherein said copy service relationship comprises a copy session, determining whether to complete said copy session and then terminate the copy service relationship;

operative if said request comprises unassigning one of said first logical volumes in a copy service relationship and if said copy session is to be completed prior to terminating said copy service relationship:

completing said copy session;

terminating said copy service relationship; and

unassiging said one of said first logical volumes.

4. The method of claim 3, further comprising the steps of:

operative if said request comprises unassigning one of said first logical volumes but does not comprise unassigning one of said first logical volumes in a copy service relationship, unassigning said one of said first logical volumes;

operative if said request comprises unassigning one of said first logical volumes in a copy service relationship and if said copy service relationship is not to be terminated, denying the request to unassign said one of said first logical volumes;

operative if said copy session will not be completed prior to terminating said copy service relationship:

terminating said copy service relationship prior to completing said copy session; and

unassigning said one of said first logical volumes.

5. The method of claim 1, further comprising the steps of:

providing a configuration interface interconnected to said first information storage and retrieval system;

determining if said copy service relationship comprises a PPRC relationship;

operative if said copy service relationship comprises a PPRC relationship, determining if said request was provided by said configuration interface;

operative if said request was provided by said configuration interface, establishing the requested PPRC relationship;

operative if said request was not provided by said configuration interface, not establishing the requested PPRC relationship.

6. The method of claim 5, further comprising the steps of:

receiving a termination request to terminate said PPRC relationship;

determining if said termination request was provided by said configuration interface;

operative if said termination request was provided by said configuration interface, terminating the PPRC relationship;

operative if said termination request was not provided by said configuration interface, denying the request to terminate the PPRC relationship.

7. The method of claim 1, further comprising the steps of:

determining if said requested copy service relationship comprises an XRC relationship;

operative if said requested copy service relationship comprises an XRC relationship, denying said request to establish said XRC relationship.

8. The method of claim 1, further comprising the steps of:

providing a configuration interface interconnected with said first information storage and retrieval system;

determining if said requested copy service relationship comprises a remote FlashCopy relationship;

operative if said copy service relationship comprises a remote FlashCopy relationship, determining if said request was provided by said configuration interface;

operative if said request was provided by said configuration interface, establishing the requested remote FlashCopy relationship;

operative if said request was not provided by said configuration interface, denying the request to establish a remote FlashCopy relationship.

9. The method of claim 1, further comprising the steps of:

determining if said requested copy service relationship comprises adding a new source logical volume and/ or a new target logical volume to an existing Concurrent Copy session comprising an existing logical volume group;

operative if said requested copy service relationship comprises adding a new source logical volume or a new target logical volume to an existing Concurrent Copy session, determining if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group;

operative if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group, adding said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session.

10. The method of claim 9, further comprising the step of operative if said new source logical volume and/or said new target logical volume are not assigned to said

existing logical volume group, not adding said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session

11. An article of manufacture comprising a computer useable medium having computer readable program code disposed therein to control access to one or more logical volumes disposed in a first information storage and retrieval system and/or in a second information storage and retrieval system using a copy service relationship, wherein a plurality of host computers are capable of communicating with said first information storage and retrieval system, the computer readable program code comprising a series of computer readable program steps to effect:

forming (N) host computer groups, wherein (N) is greater than or equal to 1;

assigning each of said plurality of host computers to the a host computer group;

forming (N) logical volume groups;

assigning one or more of said plurality of first logical volumes to a logical volume group;

receiving a request from a host computer assigned to the (i)th host computer group to establish a copy service relationship between a source logical volume and a target logical volume, wherein (i) is greater than or equal to 1 and less than or equal to (N);

determining if said source logical volume is assigned to the (i)th logical volume group;

operative if said target logical volume is assigned to the (i)th logical volume group, determining if said second logical volume is assigned to the (i)th logical volume group;

operative if both the source logical volume and the target logical volume are assigned to the (i)th logical volume group, establishing said copy service relationship.

12. The article of manufacture of claim 11, said computer readable program code further comprising a series of computer readable program steps to effect:

receiving a request to revise access rights to one or more of said plurality of first logical volumes;

determining if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship;

operative if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship, denying said request.

13. The article of manufacture of claim 11, said computer readable program code further comprising a series of computer readable program steps to effect:

receiving a request to revise access rights to one or more of said plurality of first logical volumes;

determining if said request comprises unassigning one of said first logical volumes, wherein said one of said first logical volumes is in a copy relationship;

operative if said request comprises unassigning one of said first logical volumes in a copy service relationship, wherein said copy service relationship comprises a copy

session, determining whether to complete said copy session and then terminate the copy service relationship;

operative if said request comprises unassigning one of said first logical volumes in a copy relationship and if said copy session is to be completed prior to terminating said service relationship:

completing said copy session;

terminating said copy service relationship; and

unassiging said one of said first logical volumes logical volume.

14. The article of manufacture of claim 13, said computer readable program code further comprising a series of computer readable program steps to effect:

operative if said request comprises unassigning one of said first logical volumes but does not comprise unassigning one of said first logical volumes in a copy service relationship, unassigning said one of said first logical volumes;

operative if said request comprises unassigning one of said first logical volumes in a copy service relationship and if said copy service relationship is not to be terminated, denying the request to unassign said one of said first logical volumes;

operative if said copy session will not be completed prior to terminating said copy service relationship:

terminating said copy service relationship prior to completing said copy session; and

unassigning said one of said first logical volumes.

15. The article of manufacture of claim 11, wherein said article of manufacture is capable of communicating with a configuration interface, said computer readable program code further comprising a series of computer readable program steps to effect:

determining if said copy service relationship comprises a PPRC relationship;

operative if said copy service relationship comprises a PPRC relationship, determining if said request was provided by said configuration interface;

operative if said request was provided by said configuration interface, establishing the requested PPRC relationship;

operative if said request was not provided by said configuration interface, not establishing the requested PPRC relationship.

16. The article of manufacture of claim 15, said computer readable program code further comprising a series of computer readable program steps to effect:

receiving a termination request to terminate said PPRC relationship;

determining if said termination request was provided by said configuration interface;

operative if said termination request was provided by said configuration interface, terminating the PPRC relationship;

operative if said termination request was not provided by said configuration interface, denying the request to terminate the PPRC relationship.

17. The article of manufacture of claim 11, said computer readable program code further comprising a series of computer readable program steps to effect:

determining if said requested copy service relationship comprises an XRC relationship;

operative if said requested copy service relationship comprises an XRC relationship, denying said request to establish said XRC relationship.

18. The article of manufacture of claim 11, wherein said article of manufacture is capable of communicating with a configuration interface, said computer readable program code further comprising a series of computer readable program steps to effect:

determining if said requested copy service relationship comprises a remote FlashCopy relationship;

operative if said copy service relationship comprises a remote FlashCopy relationship, determining if said request was provided by said configuration interface;

operative if said request was provided by said configuration interface, establishing the requested remote FlashCopy relationship;

operative if said request was not provided by said configuration interface, denying the request to establish a remote FlashCopy relationship.

19. The article of manufacture of claim 11, said computer readable program code further comprising a series of computer readable program steps to effect:

determining if said requested copy service relationship comprises adding a new source logical volume and/ or a new target logical volume to an existing Concurrent Copy session comprising an existing logical volume group;

operative if said requested copy service relationship comprises adding a new source logical volume or a new target logical volume to an existing Concurrent Copy session, determining if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group;

operative if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group, adding said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session.

20. The article of manufacture of claim 19, said computer readable program code further comprising a series of computer readable program steps to effect operative if said new source logical volume and/or said new target logical volume are not assigned to said existing logical volume group, not adding said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session.

21. A computer program product usable with a programmable computer processor having computer readable program code embodied therein to control access to one or more logical volumes disposed in a first information storage and retrieval system comprising a plurality of first logical volumes and/or in a second information storage and retrieval system comprising a plurality of second logical volumes, wherein a plurality of host computers are capable of communicating with said first information storage and retrieval system, comprising:

computer readable program code which causes said programmable computer processor to form (N) host computer groups, wherein (N) is greater than or equal to 1;

computer readable program code which causes said programmable computer processor to assign each of said plurality of host computers to a host computer group;

computer readable program code which causes said programmable computer processor to form (N) logical volume groups;

computer readable program code which causes said programmable computer processor to assign one or more of said plurality of first logical volumes to a logical volume group;

computer readable program code which causes said programmable computer processor to receive a request from a host computer assigned to the (i)th host computer group to establish a copy service relationship between a source logical volume and a target logical volume, wherein (i) is greater than or equal to 1 and less than or equal to (N);

computer readable program code which causes said programmable computer processor to determine if said source logical volume is assigned to the (i)th logical volume group;

computer readable program code which, if said source logical volume is assigned to the (i)th logical volume group, causes said programmable computer processor to determine if said target logical volume is assigned to the (i)th logical volume group;

computer readable program code which, if both the source logical volume and the target logical volume are assigned to the (i)th logical volume group, causes said programmable computer processor to establish said copy service relationship.

22. The computer program product of claim 21, further comprising:

computer readable program code which causes said programmable computer processor to receive a request to revise access rights to one or more of said plurality of first logical volumes;

computer readable program code which causes said programmable computer processor to determine if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship;

computer readable program code which, if said request comprises assigning to one of said (N) logical volume groups a logical volume in a copy relationship, causes said programmable computer processor to deny said request.

23. The computer program product of claim 21, further comprising:

computer readable program code which causes said programmable computer processor to receive a request to revise access rights to one or more of said plurality of first logical volumes;

computer readable program code which causes said programmable computer processor to determine if said request comprises unassigning one of said first logical volumes, wherein said one of said first logical volumes is in a copy relationship;

computer readable program code which, if said request comprises unassigning one of said first logical volumes in a copy service relationship wherein said copy service relationship comprises a copy session, causes said programmable computer processor to determine whether to complete said copy session and then terminate the copy service relationship;

computer readable program code which, if said request comprises unassigning one of said first logical volumes in a copy relationship and if said copy session is to be completed prior to terminating said service relationship, causes said programmable computer processor to complete said copy session, and then terminate said copy service relationship, and then unassign said one of said first logical volumes logical volume.

24. The computer program product of claim 23, further comprising:

computer readable program code which, if said request comprises unassigning one of said first logical volumes but does not comprise unassigning one of said first logical volumes in a copy service relationship, causes said programmable computer processor to unassign said one of said first logical volumes;

computer readable program code which, if said request comprises unassigning one of said first logical volumes in a copy service relationship and if said copy service relationship is not to be terminated, causes said programmable computer processor to deny the request to unassign said one of said first logical volumes;

computer readable program code which, if said copy session will not be completed prior to terminating said copy service relationship causes said programmable computer processor to terminate said copy service relationship prior to completing said copy session, and then unassign said one of said first logical volumes.

25. The computer program product of claim 21, wherein said first information storage and retrieval system is capable of communicating with a configuration interface, further comprising:

computer readable program code which causes said programmable computer processor to determine if said copy service relationship comprises a PPRC relationship;

computer readable program code which, if said copy service relationship comprises a PPRC relationship, causes said programmable computer processor to determine if said request was provided by said configuration interface;

computer readable program code which, if said request was provided by said configuration interface, causes said programmable computer processor to establish the requested PPRC relationship;

computer readable program code which, if said request was not provided by said configuration interface, causes said programmable computer processor to deny said request to establish the requested PPRC relationship.

26. The computer program product of claim 25, further comprising:

computer readable program code which causes said programmable computer processor to receive a termination request to terminate said PPRC relationship;

computer readable program code which causes said programmable computer processor to determine if said termination request was provided by said configuration interface;

computer readable program code which, if said termination request was provided by said configuration interface, causes said programmable computer processor to terminate the PPRC relationship;

computer readable program code which, if said termination request was not provided by said configuration interface, causes said programmable computer processor to deny the request to terminate the PPRC relationship.

27. The computer program product of claim 21, further comprising:

computer readable program code which causes said programmable computer processor to determine if said requested copy service relationship comprises an XRC relationship;

computer readable program code which, if said requested copy service relationship comprises an XRC relationship, causes said programmable computer processor to deny said request to establish said XRC relationship.

28. The computer program product of claim 21, wherein said first information storage and retrieval system is capable of communicating with a configuration interface, further comprising:

computer readable program code which causes said programmable computer processor to determine if said requested copy service relationship comprises a remote FlashCopy relationship;

computer readable program code which, if said copy service relationship comprises a remote FlashCopy relationship, causes said programmable computer processor to determine if said request was provided by said configuration interface;

computer readable program code which, if said request was provided by said configuration interface, causes said programmable computer processor to establish the requested remote FlashCopy relationship;

computer readable program code which, if said request was not provided by said configuration interface, causes said programmable computer processor to deny the request to establish a remote FlashCopy relationship.

29. The computer program product of claim 21, further comprising:

computer readable program code which causes said programmable computer processor to determine if said requested copy service relationship comprises adding a new source logical volume and/ or a new target logical volume to an existing Concurrent Copy session comprising an existing logical volume group;

computer readable program code which, if said requested copy service relationship comprises adding a new source logical volume or a new target logical volume to an existing Concurrent Copy session, causes said programmable computer processor to determine if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group;

computer readable program code which, if said new source logical volume and/or said new target logical volume are assigned to said existing logical volume group, causes said programmable computer processor to add said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session.

30. The computer program product of claim 29, further comprising computer readable program code which, if said new source logical volume and/or said new target logical volume are not assigned to said existing logical volume group, causes said programmable computer processor to deny the request to add said new source logical volume and/or said new target logical volume to said existing Concurrent Copy session.